1896MNRAS..56..330.

It is to be remarked, however, in respect to this comet:

1. That the high inclination of the comet's orbit (nearly 87°) necessarily introduces an element of uncertainty into its heliocentric coordinates on the plane of the ecliptic.

2. That the very slow movement of the comet during its earliest observations introduces a similar element of uncertainty into the *times* of these observations. Thus the movement of the comet from April 3 to April 8 was so slow that it amounted in R.A. to only about 1″·0 in 26 seconds of time, and in declination to only about 1″·0 in 750 seconds of time.

From these causes I shall not be surprised to find a considerable discrepancy between the above elements and those of the final definitive orbit, which orbit must itself, however, so it seems to me, be subject, more or less, to the same elements of uncertainty.

Parsonage, Marrickville, New South Wales:
1896 *January* 1.

Occultation of Jupiter, 1893 *February* 20 *as seen at the Durham University Observatory.*

(*Communicated by the Director.*)

The following are Mr. H. J. Carpenter's notes:—

Jupiter was found quite easily about 2 P.M., though it was faint. Unfortunately it clouded before the disappearance of the planet, and remained so till just before the reappearance, when the following observations were made:—

	G.M.T. h m s
First seen, well off Moon's disc	3 7 26
Bisected	3 8 11·0
Last contact	3 9 40·7

It was observed with the 6-inch equatorial with a power of 100.

The impression I formed was that the last contact was late, probably 2ˢ to 4ˢ. Some seconds before this time the Moon's limb had the appearance of being bulged in, or a piece cut out. This occurred so rapidly, and I was watching for "last contact," that I could not give much attention to it.

The sky was very hazy and *Jupiter* faint, but the Moon's limb was fairly well defined.

After the last time given *Jupiter* appreciably separated from the Moon.

Longitude 6ᵐ 19ˢ·7 W. of Greenwich.

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Fireball of 1895 *November* 22, 6^{h} 50^{m}. By W. F. Denning.

Having recently received two additional observations of this brilliant object, I have reinvestigated its path with fairly satisfactory results. It appeared at an epoch which is unusually productive in phenomena of this kind, and there is no doubt that the recent fireball furnishes another fine Taurid to the already numerous series recorded in past years.

I have observations from eight places—viz. Brighton, Bristol, Ealing (W.), Eastbourne, Ipswich, Isle of Wight, Rickmansworth (Herts), and Torquay—but at Bristol, Ealing (W.), and Ipswich the sky was overcast, and the observers could record no more than the sudden and intense illuminations of the firmament caused by the meteor.

At Bristol I thought the light was greater than the full Moon could have occasioned. At Ealing (W.) Mr. R. T. Lewis says "the effect was similar to that which might have been produced by the explosion of a large magnesium shell sufficiently brilliant to illuminate the entire sky." At Ipswich Mr. A. Southgate remarks that "the sky, which was densely overcast, was suddenly and completely illuminated by a brilliant bluish light which appeared to penetrate the clouds. The effect was nearly equal to that of the Moon."

At other places where the meteor itself was seen its brightness was remarkable. At Brighton Mr. A. Stanley Williams noted that it lit up the whole country to the north. At Torquay Mr. C. W. Priestley's attention was called to the meteor by a strong light behind him, which he at first thought to be due either to the search-light of a vessel or a magnesium shell. At the Isle of Wight Capt. S. G. Horton, R.A., says "the meteor commenced as a brilliant white flash, as of a magnesium flashlight, and then followed yellow, red, and green in quick succession, a long streak of whitish light coming out from the main body and vanishing. A glow of yellow light remained where the first flash occurred for about 30 seconds and gradually died away."

Several of the observers noted that the fireball was brightest in the first half of its course, and that from the place of its greatest outburst a fragment shot in the same direction, several degrees further No detonation was heard I have worked out the following details of the path :—

Fireball 1895 *November* 22.

Height when first observed	34 miles
Over	The Nore, river Thames
Height of end of brilliant part of course ...	22 miles
Over	Tilbury
Height at final extinction	17 miles
Over	Greenwich
Earth point	Reading

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